REMARKS

Claims 1-9 are pending. By this Amendment, Figs. 1-4 are corrected, non-elected claims 10-21 are cancelled, and the specification and claim 1 are amended.

Reconsideration based on the following remarks is respectfully requested.

I. The Drawings Satisfy All Formal Requirements

The Office Action objects to the drawings based on informalities. Figs. 1-4 are corrected and claim 1 is amended to obviate the objections. Withdrawal of the objections to the drawings is respectfully requested.

II. The Claims Satisfy the Requirements of 35 U.S.C. § 112, Second Paragraph

The Office Action asserts that the claimed features of the "positive direction" and/or the "negative direction" are not properly disclosed in the specification. However, the specification clearly sets forth the meaning of the "negative direction" and the "positive direction" within the context of the claimed invention. For example, the specification at page 13, lines 9-22, describes the positive X direction as towards the right, and the negative X direction as towards the left. Thus, these directions are clearly defined in the specification so to allow one having ordinary skill in the art to fully comprehend the claimed invention.

The Office Action also asserts that the claimed step of "wrapping around a first end processor, proceeding to and wrapping around a second end processor" is not disclosed in the specification so as to properly describe the invention. However, the specification at page 25, line 8 – page 26, line 5 describes a process in which a packet is sent indirectly to a target processor by wrapping around a first end processor 455 and then proceeding to and wrapping around a second end processor 465. The step of

"wrapping around a first end processor, proceeding to an wrapping around a second end processor" is clearly defined in the specification so to allow one having ordinary skill in the art to fully comprehend this step.

The specification and claim 1 is amended to obviate the remainder of the rejections under 35 U.S.C. § 112, second paragraph.

Withdrawal of the rejections under 35 U.S.C. § 112, second paragraph is respectfully requested.

III. The Claims Define Patentable Subject Matter

The Office Action rejects claims 1-4 under 35 U.S.C. § 103(a) over Nugent (U.S. Patent No. 5,175,733) in view of Hayashi et al. (U.S. Patent No. 5,826,033) and Thorson (U.S. Patent No. 6,055,618); claim 5 under 35 U.S.C. § 103(a) over Nugent in view of Hayashi and Thorson, and further in view of Ganmukhi et al. (U.S. Patent No. 6,449,667); claims 6-8 under 35 U.S.C. § 103(a) over Nugent in view of Hayashi and Thorson, and further in view of Ritter et al. (U.S. Patent No. 5,570,084); and claim 9 under 35 U.S.C. § 103(a) over Nugent in view of Hayashi and Thorson, further in view of Ritter, and further in view of Ganmukhi. These rejections are respectfully traversed.

Nugent, alone or in combination with the other applied references, does not disclose or even suggest a method for routing packets on a linear array of N processors connected in a nearest neighbor configuration, including, inter alia, determining whether a result of directly sending a packet from an initial processor to a target processor is less than or greater than N/2, and indirectly sending the packet so as to follow at least one of the wrapped paths, when the result is greater than N/2 moves, as recited in claim1.

Instead, Nugent discloses an adaptive routing means in which a plurality of processing nodes are connected in a multidimensional network A with a redundant network B. See column 3, lines 22-26 of Nugent. In order to relieve congestion in the X and Y direction within network A, a transition between the A and B networks can be made through a corresponding Z channel. See column 8, lines 2-14 of Nugent. The Office Action points out that, according to the method of Nugent, if the X displacement of a message is calculated to be greater than 0, then the message is routed in the +X direction. See column 14, lines 8-11 of Nugent. However, simply sending the message in the +X direction is not equivalent to sending the message along an indirect route. In fact, in contrast to the claimed invention, Nugent appears to calculate the most direct route for the message, even when the displacement is greater than 0. The only variable in Nugent is whether the message is routed in the positive direction or the negative direction. Nugent does not at all provide the option of sending a message along an indirect route.

Neither Hayashi, Thorson, Ganmukhi nor Ritter make up for the deficiencies of Nugent. Thus, even combining these references with Nugent would not result in the claimed invention.

For at least these reasons, it is respectfully submitted that claim 1 is patentable over the applied references. Claims 2-9, which depend on claims 1, are also patentable over the applied references for at least the reasons discussed as well as for the additional features they recite. Applicants respectfully request that the rejections under 35 U.S.C. § 103 be withdrawn.

Respectfully submitted,

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Frank Chau
Reg. No. 34,136
Attorney for Applicants

Mailing Address:
F. Chau & Associates, LLP
1900 Hempstead Turnpike, Suite 501
East Meadow, NY 11554 U.S.A.
(516) 357-0091
(516) 357-0092 (FAX)